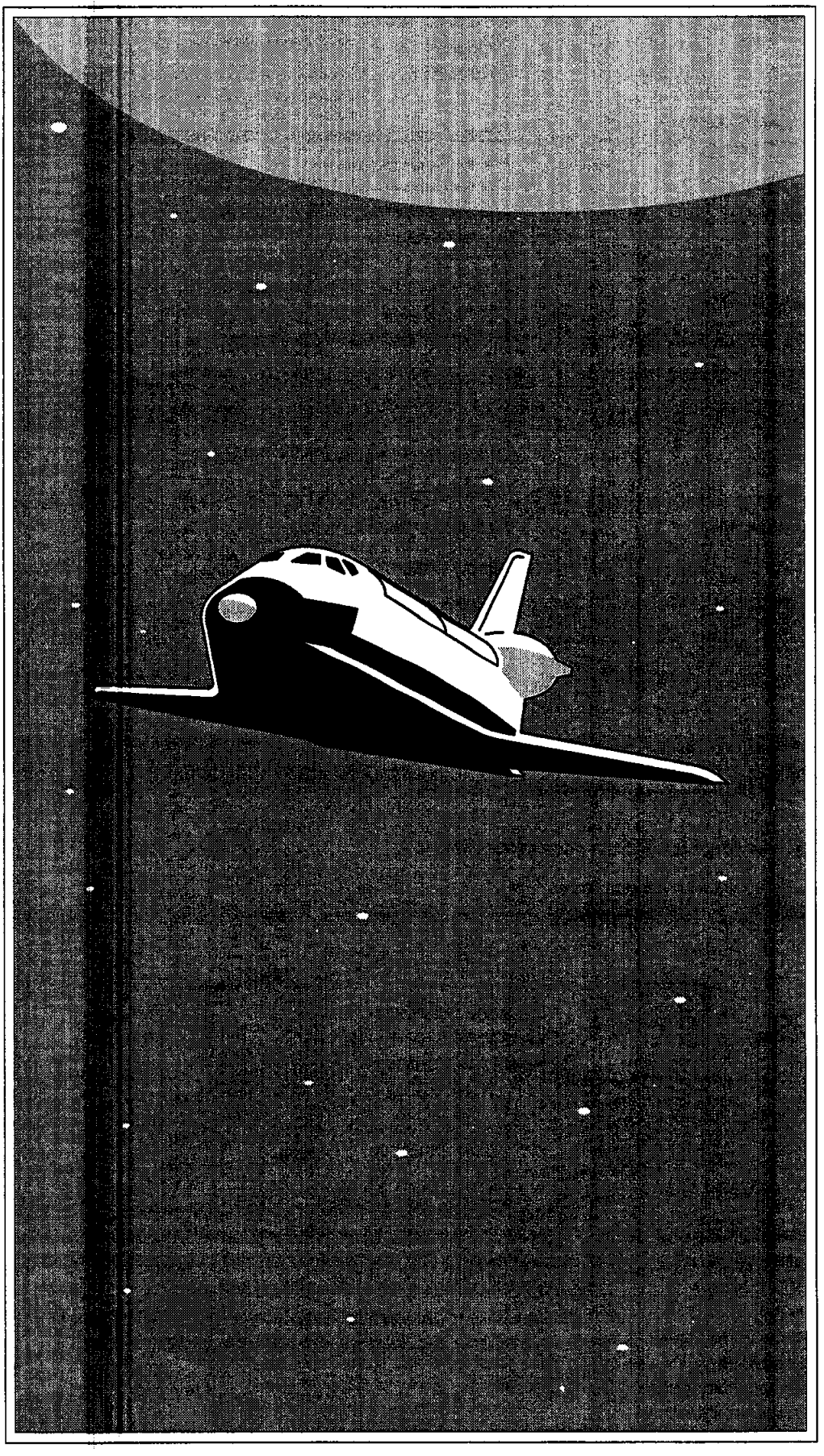
Panasonic



Operating Instructions

Colour Television

U.K. Models

TX–21S1T

TC–21S1R

TX–14S1T

TC–14S1R

Ireland Models

TX–21S1TL

TC–21S1RL

TC–14S1RL

U.K. Models :

Panasonic (U.K.) Ltd.
Willoughby Road,
Bracknell,
Berks RG12 4FP

Ireland Models :

Panasonic Ireland Ltd.
Burton Hall Road,
Sandyford Industrial Estate,
Dublin 18

Features and Accessories

Dear Panasonic Customer,
Welcome to the Panasonic family of customers. We hope that you have many years of enjoyment from your new colour television. The best way to understand the features of this television is to read this book thoroughly, before operating the set.

- .... FASTEXT Teletext (TX–21S1T / TX–14S1T / TX–21S1TL only)
- .... FASTEXT Teletext adaptable (TC–21S1RL / TC–14S1RL)
- .... C–A–T–S (Contrast Automatic Tracking System) (TX–21S1T / TX–21S1TL / TC–21S1RL only)
- .... On Screen Displays
- .... AV In / Out
- .... Multi–function Remote Control
- .... 51 Position Tuning System (1 – 50 plus VCR)
- .... Off Timer

Please check and identify the following supplied accessories.

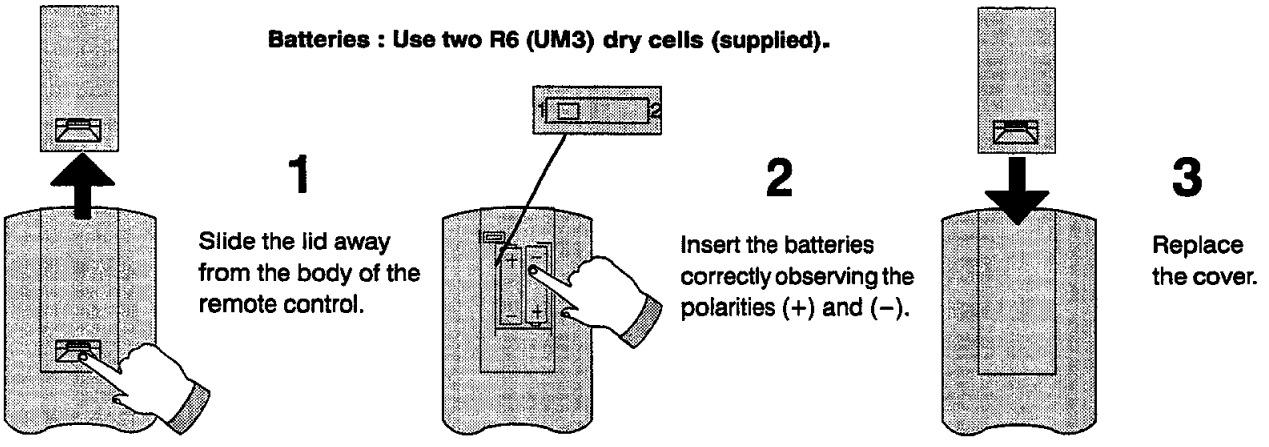
- .... Remote Control Transmitter
  TNQ8E0460 – TC–14S1R / TC–14S1RL
  TNQ8E0461 – TX–21S1T / TC–21S1R / TX–14S1T / TX–21S1TL / TC–21S1RL
- .... Batteries for the Remote Control Transmitter, (2 x R6 (UM3) size)
- .... Loop aerial – TX–14S1T, TC–14S1R.
- .... Telescopic aerial – TC–14S1RL.
- .... Television stand
  TX–21S1T, TC–21S1R only.
  (Separate Instructions are supplied with the stand).
- .... Front AV Cover
  TX–21S1T and TC–21S1R only

Contents

- .... Battery Installation and Replacement 1
- .... Warnings and Precautions 2
- .... Location of Controls and connection terminals . 3
- .... Installation and Set–up 5
- .... How to use the On Screen Displays (OSD's) ... 5
- .... Tuning Operation 6
- .... Operation of Controls 7
- .... Teletext Operation 9
- .... Connection to other equipment 11
- .... Headphones 11
- .... VCR Operation 12
- .... General Information 12
- .... Before requesting service 13
- .... Trouble–shooting 14
- .... Specifications 14

Battery Installation and Replacement

Batteries : Use two R6 (UM3) dry cells (supplied).



1 Slide the lid away from the body of the remote control.

2 Insert the batteries correctly observing the polarities (+) and (–).

3 Replace the cover.

Precautions

- If experiencing any remote control malfunctions or reduction in operating distance please check and replace batteries and clean indicator window.
- Do not use an old battery with a new one.
- Ensure the batteries are inserted with the correct polarity.
- Do not use rechargeable (Ni–Cad) batteries.
- Do not mix battery types, i.e. Alkaline and Manganese.
- Remove exhausted batteries and dispose of them immediately.

Operating Switch

If any difficulty is encountered when using this remote control with Panasonic video tape recorders please check the operation of the video recorder with the operating switch set at position one and again with the switch set at position two.

Note : The remote control supplied with TC–14S1R is not fitted with an operating switch in the battery compartment.

Trouble–shooting

Before calling for service, determine the symptoms and make a few simple checks as shown below.

Symptoms		Checks
Picture	Sound	
Snowy Picture or Multiple Images	Noisy Sound or Normal Sound	Aerial location, direction or connection
Interference	Noisy Sound	Electrical appliances, Vehicles, Fluorescent lights
Normal Picture	Noisy or No Sound	Volume level, Sound muted
No Picture	No Sound	Not plugged into A.C. outlet, Not switched on Picture / Sound controls set at minimum levels
No Colour	Normal Sound	Colour controls set at minimum levels
Scrambled	Normal or Weak Sound	Retune Channel(s)

Specifications

		TX–21S1T	TC–21S1R	TX–21S1TL	TC–21S1RL	TX–14S1T	TC–14S1R	TC–14S1RL
Power Source		220 – 240V 50Hz A.C.						
Power Consumption		58W				39W		
Picture Tube V 90°		51 cm				36 cm		
Audio Output		5W						
Dimensions	H W D	477 mm 518 mm 478 mm				364 mm 389 mm 384 mm		
Weight (kg)		21				10		
Receiving Systems		PAL – I (UHF) PAL – 60		PAL – I (UHF) PAL – 60 VHF A – S20		PAL – I (UHF) PAL – 60		PAL – I (UHF) PAL – 60 VHF A – S20
Aerial – rear		UHF		UHF / VHF		UHF		UHF / VHF
Headphones – Front		3.5mm						
AV – Rear		21 pin terminal – Audio / Video in / out, RGB in						
AV – Front		RCA Audio in / RCA Video in						

- Specifications are subject to change without notice. Weight and dimensions shown are approximate.

Warnings and Precautions

- .... This T.V. set is designed to operate on A.C. 220 – 240V, 50Hz.
- .... Do not expose this TV set to rain or excessive moisture.
- .... **WARNING: HIGH VOLTAGE !**
  Do not remove the rear cover, there are no user serviceable parts inside.
- .... Avoid exposing the TV set to direct sunlight or other sources of heat.
- .... Remove the mains plug from the wall socket when the TV set is not to be used for a prolonged period of time. Do not pull the power cable to remove the mains plug from the socket, always remove it by the plug.
- .... Before cleaning remove the mains plug from the wall socket. The cabinet and picture tube can be cleaned with a soft cloth moistened with mild detergent and water. Do not use solutions containing benzol or petroleum.
- .... TV sets can produce static electricity, care must be taken whenever touching the TV screen.

TV. Games / Home Computers

Extended use of TV games or home computers with any television set can cause a permanent 'shadow' on the screen. This type of irreversible picture tube damage, can be limited by observing the following points :

- .... Reduce the brightness and contrast levels to a minimum viewing level.
- .... Do not operate the television set for a continuous period of time while using TV games or home computers.

This type of picture tube damage, is not an operating defect, and as such is not covered by the Panasonic warranty.

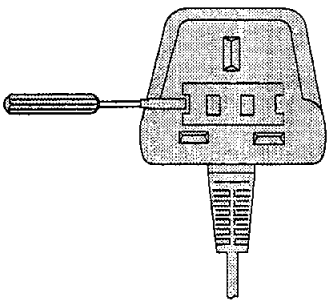
FOR YOUR SAFETY PLEASE READ THE FOLLOWING CAREFULLY

This appliance is supplied with a fitted three pin mains plug for your safety and convenience. A 5 amp fuse is fitted in this plug. If the fuse is replaced then the replacement fuse must be 5 amp rated and should be approved by ASTA or BSI to BS1362.

Check for the ASTA mark or the BSI mark on the body of the fuse.

If the fitted plug has a removable fuse cover you must ensure that it is refitted when the fuse is replaced. If you lose the fuse cover the plug must not be used until a replacement cover is obtained.

Replacement fuse covers can be purchased through your local Panasonic dealer.



If the fitted plug is unsuitable for the socket outlet in your home then the fuse should be removed and the plug cut off and disposed of safely. There is danger of severe electrical shock if the cut off plug is inserted into any 13 amp socket.

If a new plug is to be fitted please observe the wiring code as shown below.
If in any doubt please consult a qualified electrician.

How to replace the fuse :
Lift out the removable fuse compartment with a screwdriver and replace the fuse, then refit securely into the mains plug.

IMPORTANT :– The wires in the mains lead of this appliance are coloured in accordance with the following code :–

BLUE : NEUTRAL **BROWN : LIVE**

As the colours of the wires in the mains lead of this appliance may not correspond to the markings identifying the terminals in your plug, proceed as follows :–

1. The **BLUE** wire must be connected to the terminal marked 'N' or coloured black.
2. The **BROWN** wire must be connected to the terminal marked 'L' or coloured red.

IMPORTANT NOTE: Under no circumstances should either of these wires be connected to the Earth terminal of the three pin plug, marked with the letter 'E' or the earth symbol (⏚).

Before requesting service

Service

Before requesting service, please read the following common questions and their answers, also please study the trouble–shooting guide on page 14 to help to rectify the problem. To obtain service please contact your local Panasonic dealer quoting the model number and serial number (both are located at the rear of the TV).

Q **Why does the picture drift away and go all snowy when I switch the TV on ?**

A Firstly check that you have tuned it into the strongest signal for that channel, if there is no improvement then you must now check the aerial and it's connections. If you encounter any difficulties then it is advisable that you contact a qualified aerial installer.

Q **A friend told me to use SCART cables to connect my Video recorder, what are they, what do they do ?**

A A SCART socket when used in conjunction with a SCART cable gives a high quality, easy connection between your television, VCR, audio system or satellite receiver.
A SCART cable may also be referred to as a 'Euroconnector cable', 'a Peritel cable', 'a Euro AV cable' or 'a 21 pin cable'.

Q **I have a Video recorder and a Satellite Receiver, both require a Scart input. How do I connect them to this T.V. ?**

A To be able to connect all the equipment via SCART cables, either the VCR or Satellite receiver needs to have two SCART sockets, one for input, the other for output.

Q **I have a Video connected to the T.V. set via the rear 21 pin SCART socket. When I connect a Video Camera to the front AV (RCA) terminals the picture is unwatchable, Why ?**

A When you connect equipment to the front AV (RCA) terminals, you should ensure that whatever is connected to the rear SCART terminal is disconnected whilst using the front AV (RCA) terminals.

Q **Some stations take longer than others to find the Teletext page, is there something wrong ?**

A No, this is not a fault, Teletext services vary in content, style and speed depending on the Broadcasting company.

Q **Is it possible for me to take my T.V. with me on holidays abroad ?**

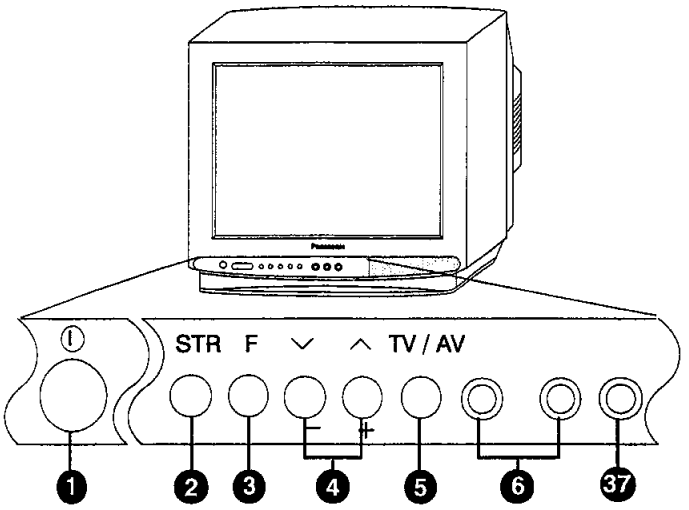
A Operating voltages and transmission standards vary around the world, your dealer can provide specific information for the country you intend visiting.

Q **The Television switches itself off about 30 minutes after the TV Station stops transmitting, is there something wrong with it ?**

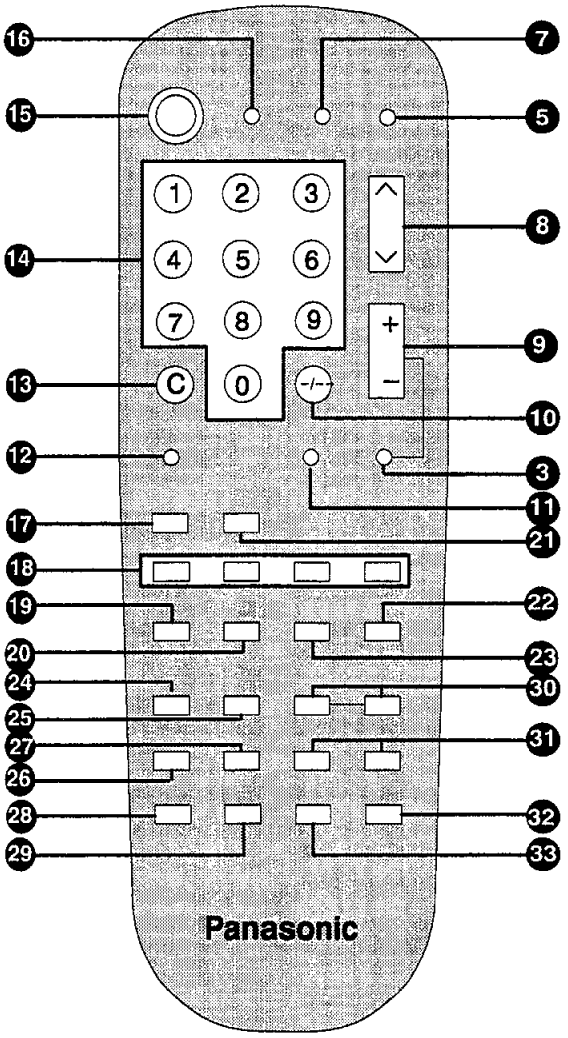
A No, nothing is wrong, this is the sleep feature as described on Page 12.

Location of Controls and connection terminals

Front of Television



Remote Control (TNQ8E0461)



1 Mains On / Off

Switches the TV On and Off.

2 Store (STR)

Used to store the channels in Tuning Mode or to store the normal settings when the function is displayed.

3 Function Select (F)

Display's the On Screen Display functions, use repeatedly to select from the available functions.

4 + / – / ^ / v

Increases or decreases the programme position by one. When a function is already displayed, press to increase or decrease the selected function.

5 TV / AV

Switches between Television and Audio / Video operation.

6 RCA Audio / Video sockets

For the connection of Audio / Video equipment e.g. VCR.

7 Sound Mute

Mutes the sound.

8 Programme up / down

Changes programme position or teletext page by one.

9 + / –

Increases or decreases the currently selected function.
Increases or decreases the volume if no function is selected.

10 Programme position 10 – 50

Selects programme positions from 10 to 50.

11 Normalisation

Recalls the levels previously set with the store key.

12 Off Timer

Sets the time after which the TV switches off to the Standby mode.

13 Direct channel access

Allows direct access to local channels via the 0 – 9 keys.

14 0 – 9 keys

Selects programme numbers or teletext pages (Teletext models only).

15 Standby

Press to switch the TV on or off.

16 Status

Displays the channel number and programme position.
Teletext models also display the time and teletext station name.

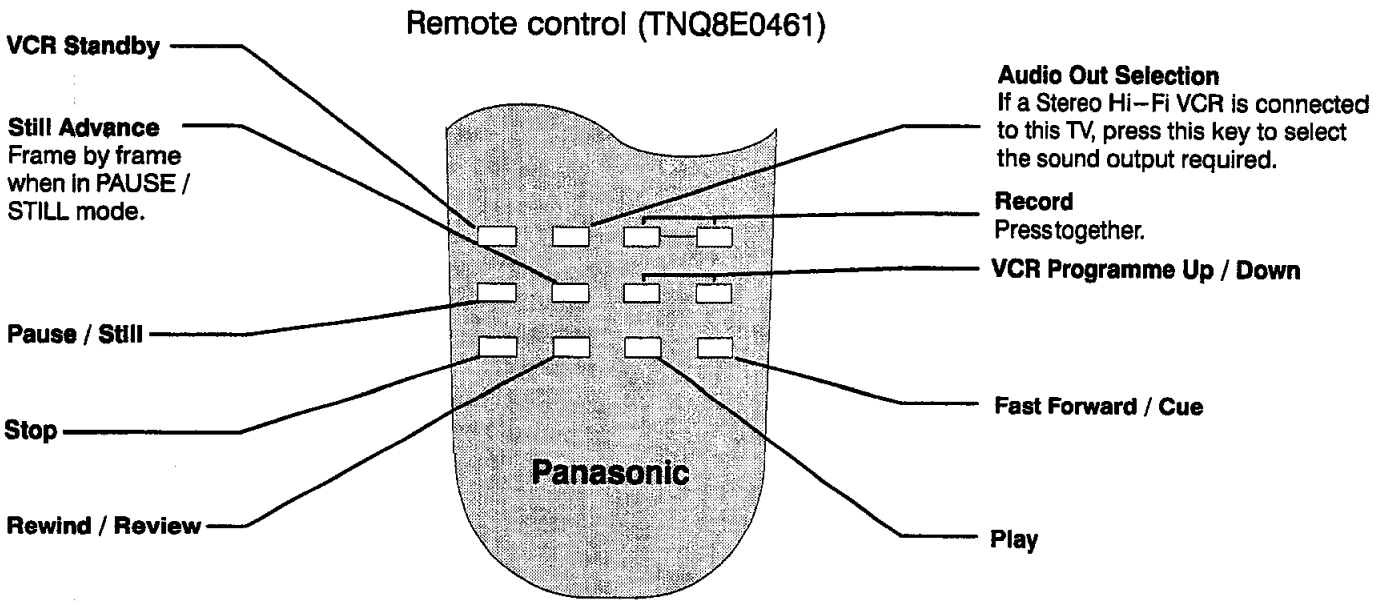
The following functions (17 – 33) only apply to Teletext and adapted models using the Teletext remote control.

17 TV / Teletext

Switches between Teletext and normal TV operation.

VCR Operation

The Remote Control is capable of operating some functions of selected Panasonic VCR's, please consult your dealer for details. Some VCR's have different functions, so to ensure compatibility, please refer to the VCR instruction book.



Note :

If any difficulty is encountered when using this remote control with Panasonic video tape recorders please check the operation of the video recorder with the operating switch set at position one and again with the switch set at position two (for details of the location of this switch please refer to Battery Installation and Replacement on page 1).

Sleep Feature

If the set is not switched off when the TV station stops transmitting, it will automatically go to standby mode after 30 minutes. This function will not operate when the TV is in AV mode.

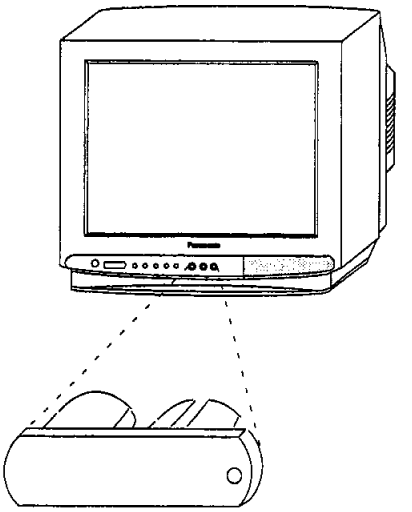
Last Position Memory

Certain functions have a last position memory, i.e. the setting at the time of switch off will be the setting used when the receiver is switched on again:-

Programme position	Colour	Volume
Contrast	Brightness	Standby
Sharpness	Status	C-A-T-S (21" only)

Front AV Cover

An AV cover is supplied on the TX-21S1T and TC-21S1R models to cover the front RCA and headphone terminals. Gently prise it off to remove, press it on to replace.



18 Coloured keys (Red / Green / Yellow / Blue)

To enable selection of topics in FASTEXT operation and page numbers in Normal operation.

19 Hold

Allows the current page to be held.

20 Time Text

Allows selection of any sub–pages within teletext pages.

21 Index

Displays the index page for the current teletext station.

22 Full / Top / Bottom

Switches between the Top, Bottom and Full page display.

23 Reveal

Reveals hidden answers to Teletext quizzes.

24 VCR Standby

Sets the VCR into standby.

25 Audio out

Selects the correct sound output for a Stereo HiFi VCR.

26 Pause / Still

Pauses the picture.

27 Still Advance

Advances the picture frame by frame in Pause / Still mode.

28 Stop

Stops the tape.

29 Rewind / Review

Rewind the tape or review when in play mode.

30 Record

Press to record.

31 VCR Programme up / down

Changes programme position by one.

32 Fast Forward / Cue

Forward the tape or cue the picture.

33 Play

Playback the tape.

34 Mains Plug

The mains connection is made with this plug (220 – 240V, 50Hz).

35 Aerial Socket (RF IN)

The aerial connects to this socket. For 14" models connect the supplied aerial to this socket only if it is to be used.

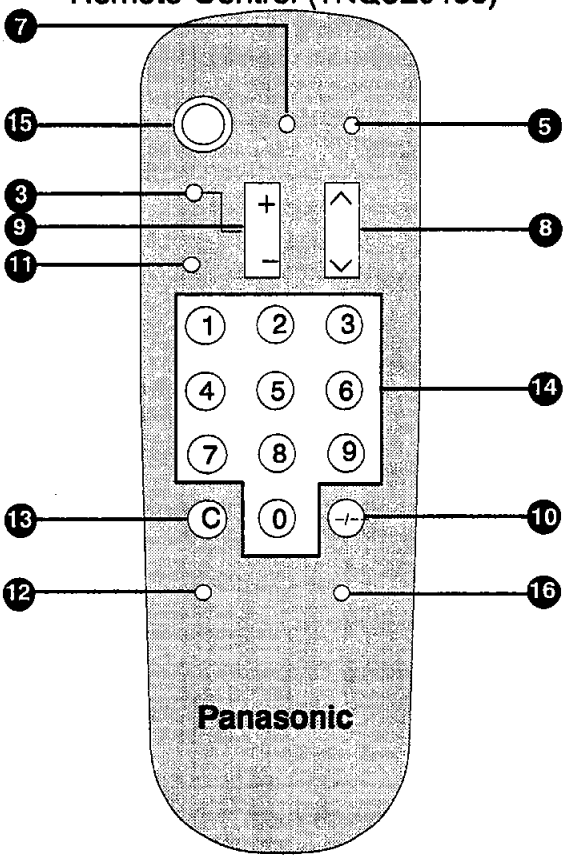
36 21 pin SCART terminal

This carries input and output signals for both picture and sound. VCR's and other equipment with a SCART terminal can be connected to this.

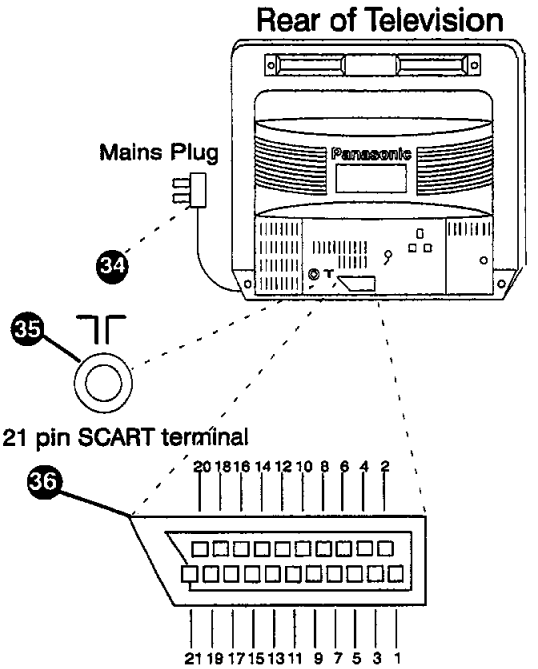
37 Headphones terminal

For the connection of headphones with a 3.5mm jack plug.

Remote Control (TNQ8E0460)



Rear of Television

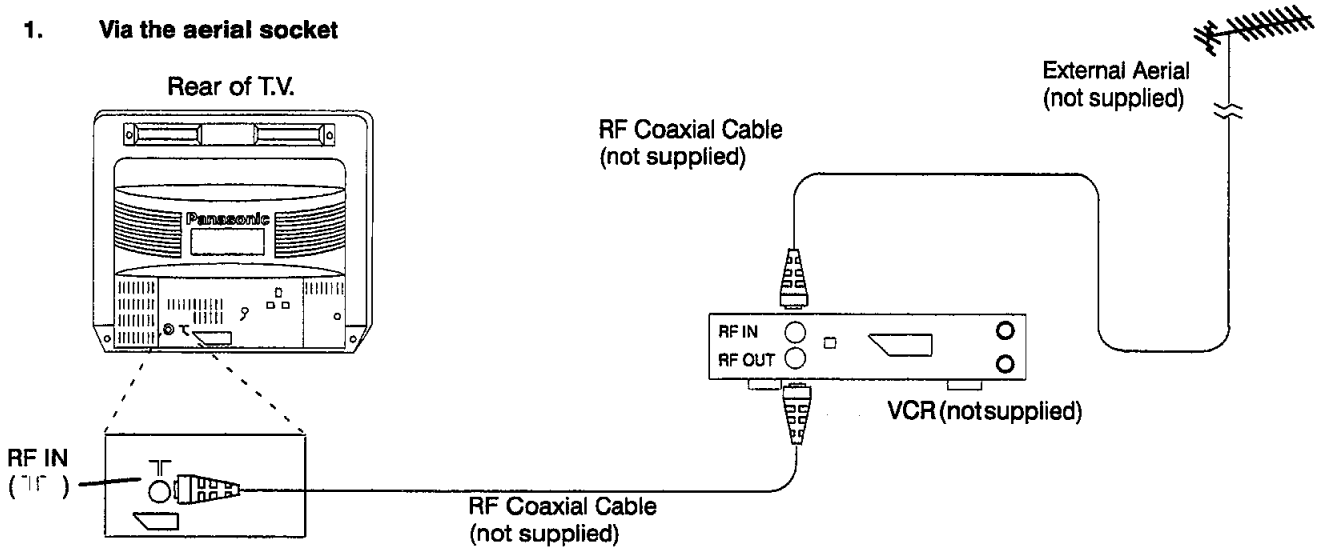


21	Socket Earth	20	CVBS in (video)
19	CVBS out (video)	18	RGB status earth
17	CVBS earth	16	Status RGB
15	Red in	14	Ground
13	Red earth	12	– –
11	Green in	10	– –
9	Green earth	8	Status CVBS
7	Blue in	6	Audio in (L)
5	Blue earth	4	Audio earth
3	Audio out (L)	2	Audio in (R)
1	Audio out (R)		

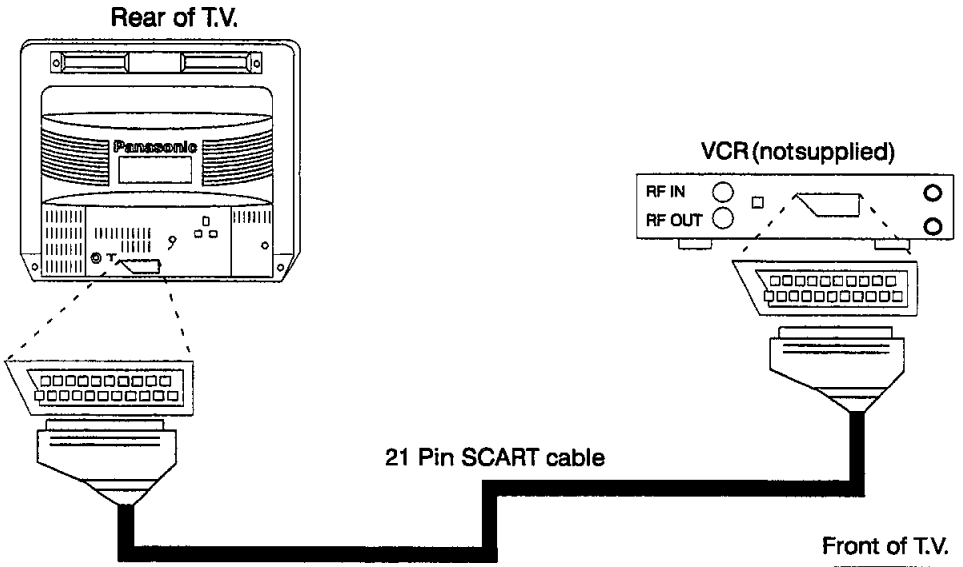
Connection to other equipment

Connection of a Video Cassette Recorder (or other suitable equipment)

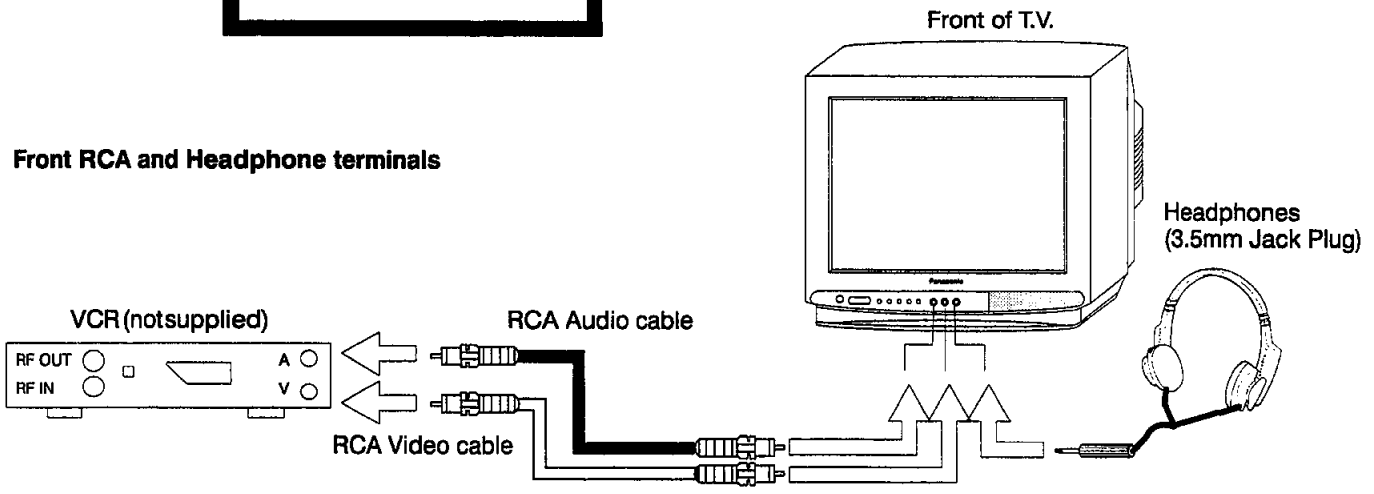
1. Via the aerial socket



2. Via the Audio / Video terminals



Front RCA and Headphone terminals



Notes :

- Cables shown are not supplied.
- Do not connect a computer with TTL output (5V) to this set.
- The TV's speaker will be automatically disconnected whilst the headphones are connected.
- Do not connect front and rear AV inputs simultaneously, if they are the sound and pictures will be mixed.

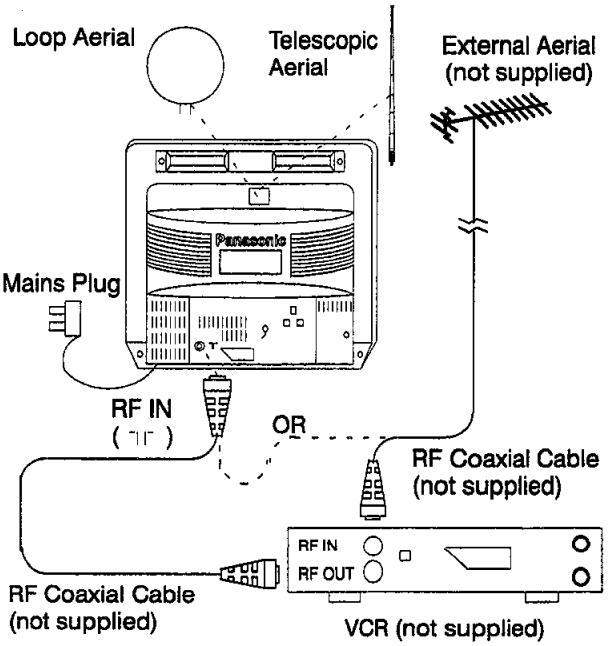
Installation and Set–up

Aerial connection (14" models only)
An aerial is supplied with the 14" models, the type (Loop or Telescopic) depends upon the model. If the supplied aerial is not going to be used do not fit it, as when it is fitted it can only be removed by qualified service personnel.
Insert the supplied aerial into the hole on the top of the TV set. Connect the Aerial plug to the RF IN socket (⊓) at the rear of the TV.

Aerial adjustment
Adjust the direction of the aerial until the best picture quality is received. If the picture quality is not satisfactory then it is advisable to connect an external aerial.

External aerial connection
If an external aerial is used it must be connected using a standard 75 ohm aerial plug to the RF IN (⊓) socket at the rear of the TV.

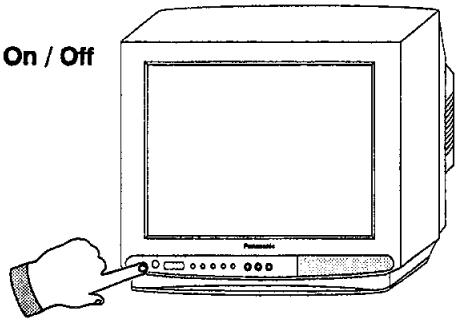
Aerial connection via a VCR
If a VCR is to be connected between the aerial and the TV please refer to page 11.



Mains connection
Plug the mains plug into a suitable electrical socket.

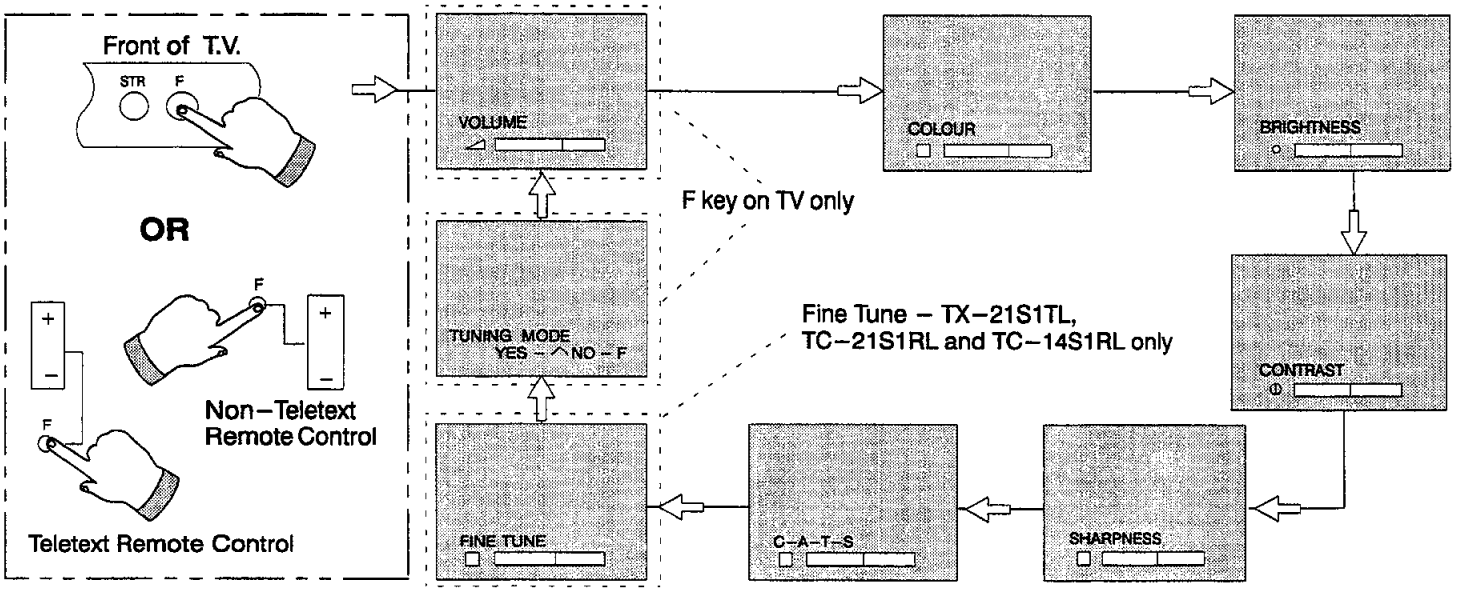
Mains On / Off
To switch ON press the Power on / off button on the front of the TV. If the power to this TV is interrupted whilst it is switched on, when power is returned the TV will automatically switch back on.
To switch OFF press the Power On / Off button again.

Switching On / Off



How to use the On Screen Displays (OSD's)

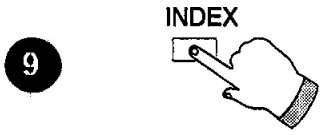
Sound, picture and tuning adjustments are carried out through a series of On Screen Displays, accessed by pressing the **F** key on the front of the TV or on the remote control.



Notes :

- It is not possible to select the Volume or Tuning Mode displays when using the Remote control **F** key, they can only be accessed with the **F** key on the TV.
- If the **F** key is not pressed within 6 seconds of each selection the display will disappear.
  When the **F** key on the front of the TV is pressed again, the display will start off at Volume.
  When the **F** key on the remote control is pressed again, the last displayed function will be re–displayed.

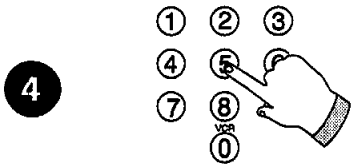
Index



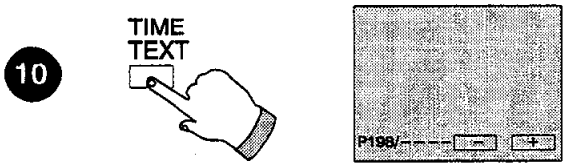
Press in FASTEXT mode to return to the relevant index page. Depending on the way information is transmitted, this may have to be pressed more than once to return to the main index page.

Sub Coded Page Access

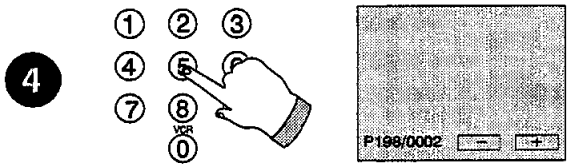
When teletext information exceeds more than one page, it may take some time for the automatic changing of the sub pages to reach the sub page you require. It is possible to enter the required sub page and skip the pages in between.



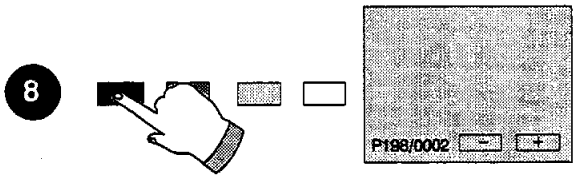
Select the required page number using keys 0 – 9.



Press TIME TEXT.



Enter desired sub page number using 0 –9 on the remote control.
e.g. for sub page 2 press 0,0,0,2.
OR

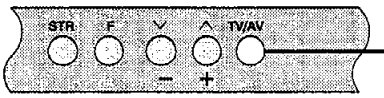


Press RED (–) or GREEN (+) to move up or down a sub page number at a time.

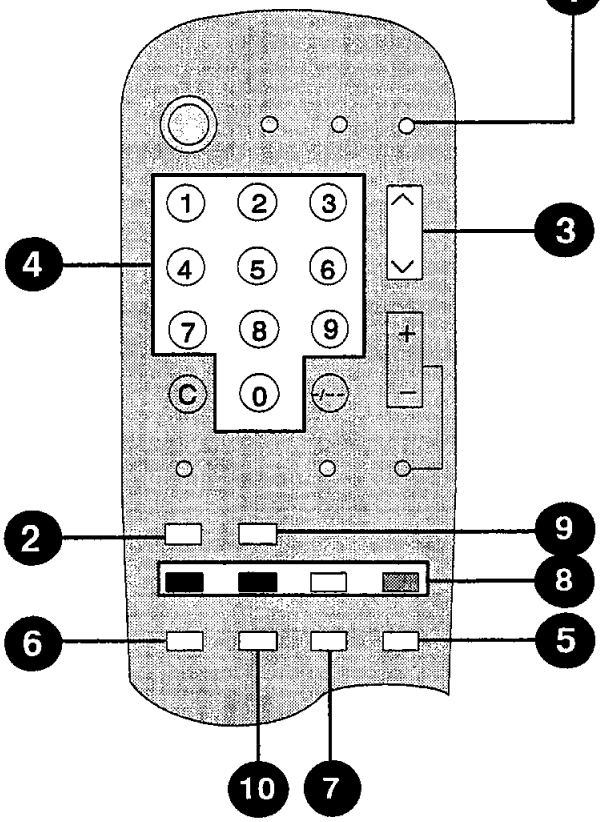
The current page will change to the required sub page when it is found.

Press TV / TEXT to return to normal TV operation.

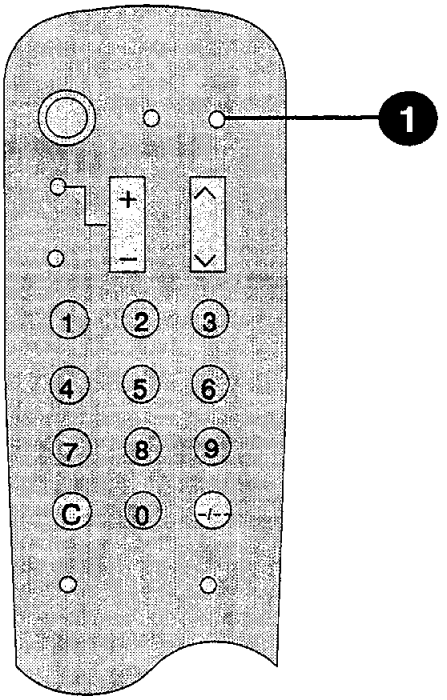
Front of Television



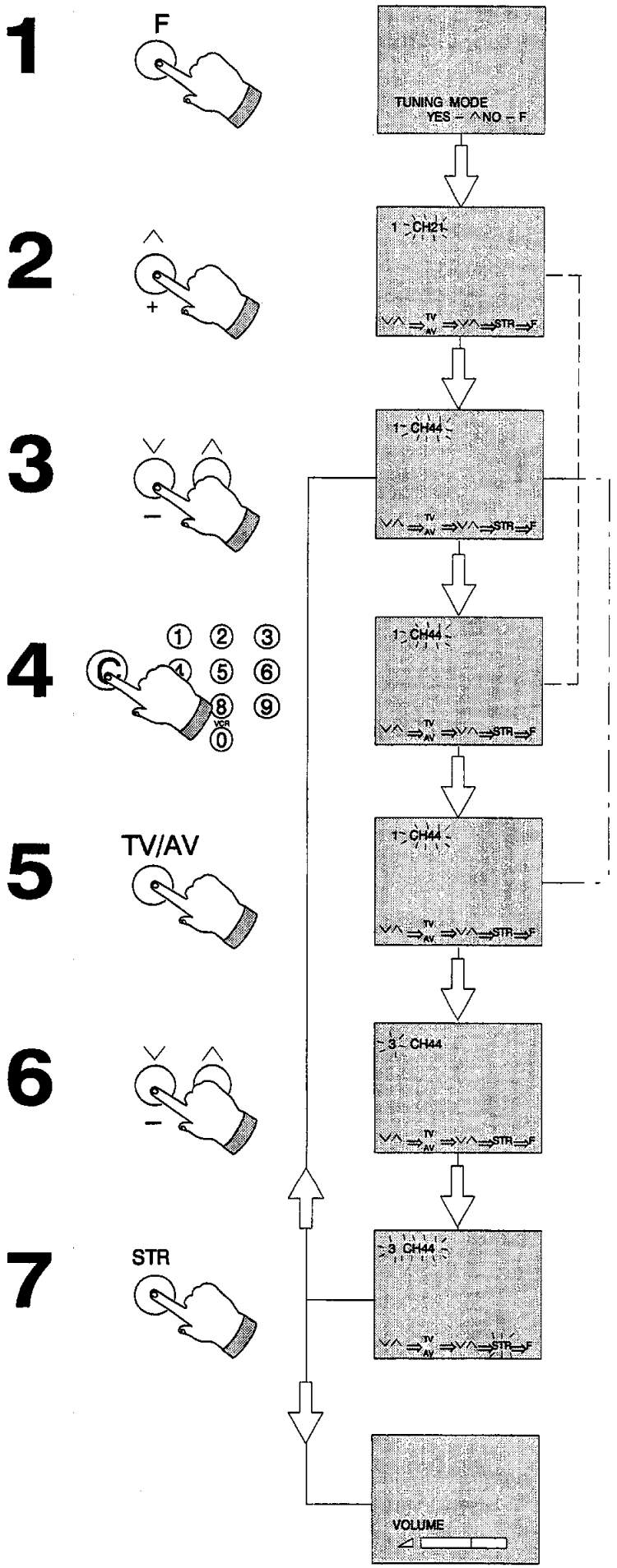
Remote control (TNQ8E0461)



Remote control (TNQ8E0460)



Tuning Operation



Repeatedly press the " **F** " key on the front of the TV until the screen displays " **TUNING MODE** ".

Press " ^ " to enter " **TUNING MODE** ".

If the local channel numbers are known proceed to Step 4.

Press "v ^ " to search for the desired channel.

For TX–21S1TL, TC–21S1RL and TC–14S1RL :
To receive a VHF channel, continue tuning past the UHF band, i.e. CH 21 – 69.

Now proceed to Step 5.

Only use this Step if the local channel numbers are known

Press the " **C** " key on the remote control.
Enter the channel number within five seconds using the numeric keys (0 – 9).
For TX–21S1TL, TC–21S1RL and TC–14S1RL :
To receive a Hyperband channel, press the " **C** " key then the –/– – key, then enter the channel number usng the numeric keys (0 – 9).

Press " **TV / AV** " key when desired channel is displayed.

OR

Enter programme position required directly using the 0 – 9 keys on the remote control.

Press "v ^ " to select the desired programme position.

Note : Position '0' should be used as the VCR channel.

Press " **STR** " to store the selected channel on the current programme position.

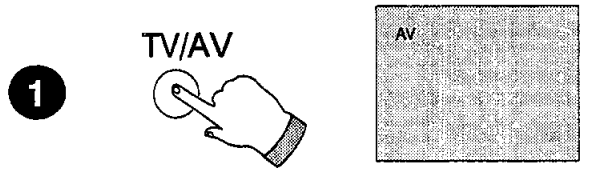
Repeat steps 3 to 6 to store other channels or press " **F** " key to exit " **TUNING MODE** ".

Note :
When tuning the TV into a VCR, programme position '0' should be selected (The screen will show 'VCR'). If the VCR has a test signal switch at the rear it is advisable to switch this ON, and search for the test pattern when tuning it in.

Operation of Controls

TV / AV Selection

AV (Audio / Video) is a dedicated input for VCR's, Satellite receivers and other Audio / Video equipment.



Press TV / AV key to switch between TV and AV mode.

Note :

- . . . . This TV is capable of switching to AV operation automatically if the equipment connected provides a switching signal to the SCART socket.
  In this condition the display will show EC and it is possible to change the programme position of the TV without changing the displayed picture.
- . . . . Examples of Audio / Video connections are shown on page 11.

Teletext Operation (Teletext and adapted models only)

Teletext is the broadcasting of pages of information on your T.V. screen containing various subjects, the order and availability of which is dependant upon the Broadcasting Companies. All Teletext features are operated via the Remote Control.

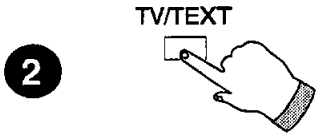
Notes :

- The following models are already equipped with Teletext, TX–21S1T, TX–14S1T and TX–21S1TL.
- The following models can be adapted to receive Teletext using the appropriate adaptor kit :
  TC–21S1RL using a TY–555 adaptor kit.
  TC–14S1RL using a TY–560 adaptor kit.
  Please consult your dealer for further details.
- TC–21S1R and TC–14S1R are not Teletext adaptable.
- If the Function Select key (**F**) is pressed whilst in Teletext operation, only the Brightness and Contrast can be selected and adjusted.

FASTEXT / Normal Automatic Selection

On switching to Teletext, normal mode will be displayed whilst a search is performed for FASTEXT transmissions, if one is found, the boxes at the bottom of the screen will change to show the available subjects, if a FASTEXT signal is not found then the TV will operate in NORMAL mode whereby the next four available pages will be shown in the boxes.

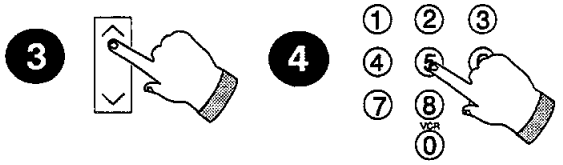
TV / Teletext mode



Press the TV/TEXT key to show a page.
Press again to return to TV. mode.

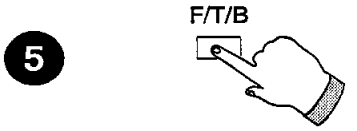
Page Selection

Pages can be selected in two ways :



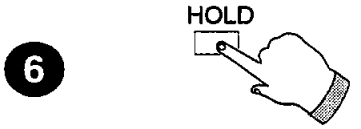
- Press the Up / Down keys to increase or decrease the page number by one to the next or previous available page.
- By entering the page number, using 0 –9 on the remote control.

Full / Top / Bottom



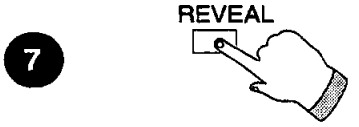
Press to switch between the Top, Bottom and full page.

Hold



Press to hold or cancel the hold on the current page.

Reveal



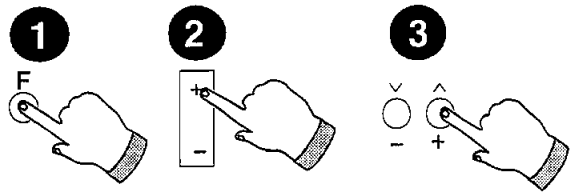
Press to reveal or hide hidden answers e.g. quiz pages.

Red / Green / Yellow / Blue keys

In FASTEXT mode these correspond to the differently coloured subjects.
In NORMAL mode they correspond to the next four available pages.

Function select (F)

Press **F** to select the required function.

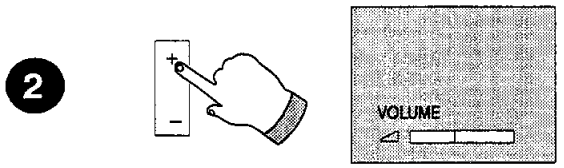


Press + or – to adjust.

The Volume and Tuning Mode functions can only be displayed when using the **F** key on the front of the T.V.

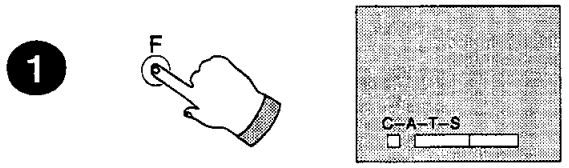
Remote Control adjustment of the volume is achieved using the + and – keys directly.

Volume (Remote Control Operation)



Press to adjust.

C–A–T–S (Contrast Automatic Tracking System)
(TX–21S1T, TC–21S1R, TX–21S1TL and TC–21S1RL only).
This feature automatically adjusts the contrast setting of the TV set to compensate for any changes in the ambient lighting of its surroundings.



Operation :
To obtain best results with C–A–T–S it is recommended that the Contrast is first set to maximum, this will allow a greater range for C–A–T–S to operate within.
Press **F** to step through to C–A–T–S.
Press + or – to select one of the three settings :

C–A–T–S Off – Sensitivity switched Off

C–A–T–S Mid – For medium sensitivity

C–A–T–S High – For high sensitivity

Standby mode

Press to switch the TV. off for a period of time.
To switch back on perform one of the following :
Press Standby again. 4

Select a programme position from 0 – 9 on the remote control. 5

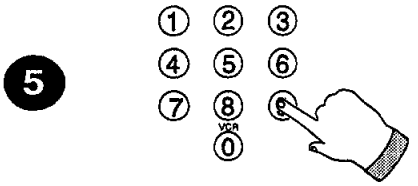
Press programme up / down on the TV. 3

Note :
If the TV. is in Standby mode it is not possible to switch it back on using the Power switch (located at the front of the TV.).

Direct Channel Access

If the local channel numbers are known, they may be accessed directly using the following method.

Press the 'C' key.
For TX–21S1TL, TC–21S1RL and TC–14S1RL :
To select a Hyperband channel, press the 'C' key followed by the '– / – –' key.

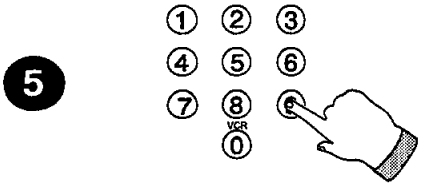


Press the numeric keys within five seconds. (e.g. for channel 5 press 0 and 5). The screen will display the channel.

Programme Position Selection

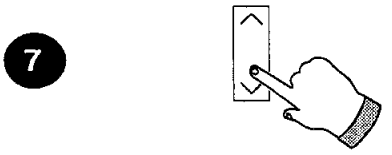
There are three ways to select a different programme position :

A



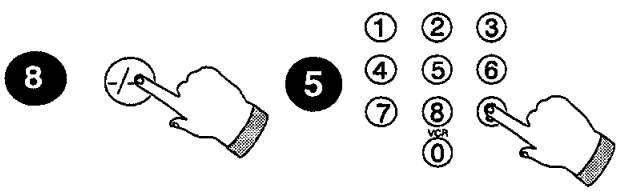
To select a programme between 0 – 9 press numeric key once.

B



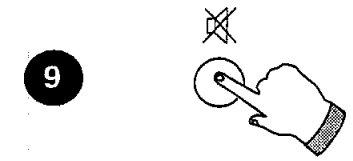
Press up / down to change programme position by one.

C



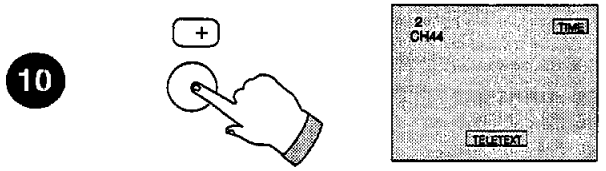
To select a programme position between 10 – 50 press the –/– – key followed by the numbers required.

Sound Mute



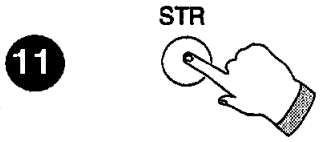
Press to mute or restore the sound.

Status



Press to display the channel number and programme position. Teletext and adapted models will also display the time and teletext station name.
The programme position will remain on screen, press Status again to remove.

Normalisation Store



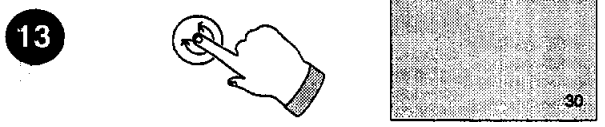
Adjust the Volume, Colour, Brightness, Contrast or Sharpness to desired viewing levels. Press STR whilst a function is still displayed to store all the levels in memory.

Normalisation

Press to recall the levels previously set with Normalisation Store.

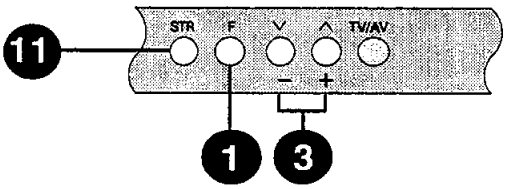
Off Timer

This enables you to select the time after which the TV switches off to the Standby mode.

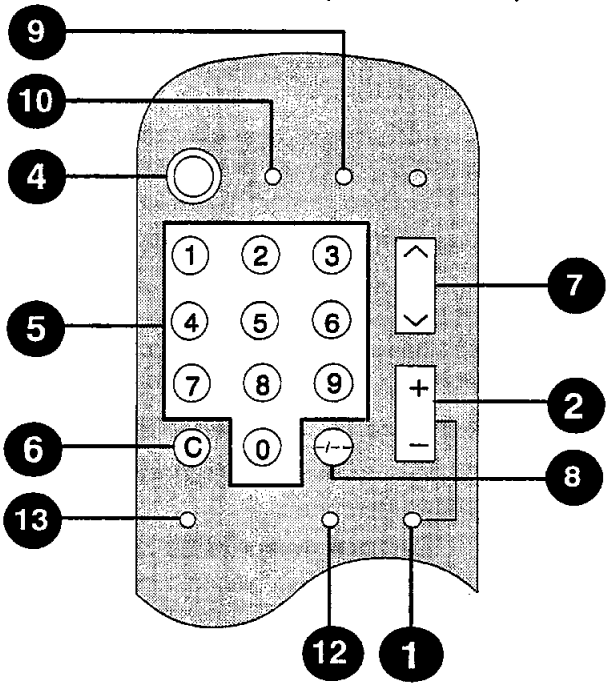


Press to select the required Off Time of 30, 60 or 90 minutes. The selected time will be displayed in the bottom right of the screen. To cancel press until the screen shows '0'.

Front of Television



Remote control (TNQ8E0461)



Remote control (TNQ8E0460)